

ABSTRACT OF THE DISCLOSURE

A self propelled upright vacuum cleaner is provided with a hall effect sensor to provide a varying voltage according to the position of the cleaner handle. The varying voltage is input to a microprocessor which controls the speed and direction of the propulsion motor. The microprocessor is programmed with one or more desirable response characteristics for the propulsion motor based upon the input from the hall effect sensor. In an alternate embodiment of the invention, two hall effect sensors are utilized to provide a pair of voltages to a microprocessor to control the speed and direction of the motor. In another alternate embodiment, a wheel sensor is used to detect the movement of the suction nozzle and provide an output to the microprocessor to control the speed and direction of the propulsion drive motor.